IV. REMARKS

1. Claims 1, 5 and 6 are amended.

2. Claims 1-2 and 5-6 are not unpatentable over Persson in view of Ohta under 35 U.S.C. §103(a).

Claims 1, 5 and 6 are amended to clarify that the TDMA frames for uplink user data transmissions are separate from TDMA frames for downlink user data transmissions. The combination of Persson in view of Ohta does not disclose or suggest each feature of Applicants' invention as claimed.

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. *In re Vaeck*, F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). See MPEP § 2143.

Even if a skilled person would have combined the teachings as the Examiner suggests, all of the claimed limitations are not taught by the combination of Persson and Ohta.

Persson discloses a mobile system comprising a mobile station M (see FIG. 1) and base stations B1 and B2 operating according to

a TDMA (Time Division Multiple Access) principle. Although Persson discloses a half-duplex structure (see Figs. 3 and 4), the structure disclosed is not a multislot structure. It is very clear from the Figures 3 and 4 that a user gets only one time slot (TSO) in uplink and only one time slot (TMO) in downlink. Although Persson's claim 1 (col. 5, lines 25 to 30) indicates that the number of reception time slots is the same as the number of transmission time slots, this only means that the TDMA frames have the same number of time slots, in total. For a single mobile station, only one time slot is allocated in uplink and only one time slot is allocated in downlink.

To summarize, Persson fails to disclose at least the following elements as claimed by Applicants:

a) TDMA radio system having multi-slot capabilities; and
b) allocating a greater number of time slots in each downlink TDMA frame than in each uplink TDMA frame.

Ohta discloses a cable system and "a TDMA scheme" to operate the system.

If the skilled person would have combined the teachings of Persson and Ohta he would not have used other information in Ohta than that one relating to the mentioned TDMA scheme. It should be noted that the CDMA technology is not relevant to the invention since no TDMA frames are present in this technology (claim 1 expressly talks about TDMA frames).

Ohta's TDMA scheme is, for the first time, introduced on column 2 lines 9 to 65. The passage from line 37 to line 41 reads:

> "A terminal station 51 uses an uplink time slot ts1 for transmission and a downlink time slot Ts1 for reception, respectively, while a terminal station 52 uses an uplink time slot ts2 for transmission and a downlink time slot Ts2 for reception, respectively." (emphasis added).

This passage shows (together with Figs. 10 and 12) the basics of the TDMA scheme of Ohta. It is clearly stated and shown in Fig. 10 that only one time slot in a TDMA frame is allocated for each terminal for each direction. Also, Fig. 12, which lists main specifications for the TDMA scheme, does not give any hint of allocating more time slots in downlink than in uplink.

Although carrier frequencies do not directly relate to time slots it is still to be said that even the number of carriers is same for each direction, as disclosed in Fig. 12. Therefore, it is not understood what could form the basis for the Examiner's rejection and his (believed) misunderstanding.

It is submitted that Ohta does not, in our opinion, add anything to the teaching of Persson as far as the claimed invention is concerned. Especially, Ohta deals with cable environment and, at least, does not disclose allocating a greater number of time slots in each downlink TDMA frame than in each uplink TDMA frame.

The Examiner has in an earlier Office Action referred to Fig. 2A of Ohta and the related text on column 8, lines 37 to 56. These present an assignment of frequency bands, wherein an uplink band ranges from 10 MHz to 50 MHz and an downlink band ranges from 70 MHz to 450 MHz. The Examiner might think that the fact that the

downlink band is broader would mean that there would be more TDMA time slots allocated in downlink than in uplink for a terminal. This is, however, not the case. Firstly, frequency bands do not directly relate to time slots since "time" and "frequency" are different things. Secondly, the mere fact that a downlink band is broader does not mean that the whole band would be in use. Thirdly, and probably most importantly, there is no disclosure in Ohta that the television signals transmitted on the broad downlink band would even be transmitted using TDMA technology (it is remembered that claim 1 expressly mentions TDMA frames).

The passage also indicates that three empty 6MHz bandwidths originally assigned to transmission on TV signals can be used for bi-directional transmission of audio and data signals. However, there is no disclosure about allocating more time slots in downlink that uplink. The passage just mentions bi-directional transmission.

When Ohta is being read a bit further, col. 9, lines 9 to 13 mention, concerning the transmission of audio signals, that operation of an audio channel is identical to the counterpart in the conventional MCA/C telephone system. Thus, also here, no disclosure about allocating more time slots in downlink than uplink exists.

Concerning the data signals, a description relating to the TDMA scheme is found in col. 13, lines 11 to 16. This passage states that a data channel is configured to require two time slots for uplink and downlink. Thus, also here, no disclosure about allocating more time slots in downlink than uplink is presented.

The Examiner's rejection can, therefore, not be understood. No combination of Persson and Ohta will end up within the scope of the claimed invention.

Also, it is submitted that the combination of Persson with Ohta is not appropriate. A skilled person would not have combined the teachings of Persson and Ohta since Persson and Ohta do not share a common problem to be solved.

Although the Examiner states that Persson and Ohta are in the same field of endeavor he does not give reasons or support for this statement. It is respectfully submitted that the motivation required under M.P.E.P. § 2143 et seg. to combine the references is not present. The "references must expressly or impliedly suggest the claimed invention." (M.P.E.P. § 2143 page 2106 - 2122). Thus, there must be some objective teaching and objective evidence of record to support why a skilled artisan, with no knowledge of the claimed invention, would have selected the components for combination in the manner claimed. See In re Lee, 61 USPQ2d 1430, 1433-1434 (Fed. Cir. 2002). Moreover, when an Examiner maintains that there is an explicit or implicit teaching or suggestion in the prior art, the Examiner should indicate where (page and line or figure) such a teaching or suggestion appears in the prior art. See In re Rijckaert, 28 USPQ 2d 1955, 1957 (Fed. Cir. 1993), wherein it is stated that "when the PTO asserts that there is an explicit or implicit teaching in the prior art, it must indicate where such a teaching or suggestion appear in the reference." (emphasis added).

Thus, it is not enough for the Examiner to merely state that the references are in the same field of endeavor. He must identify

with specificity in the references any motivation to combine will be found. (M.P.E.P. 2143 et seg.). It is submitted that there is no such motivation and the references are not combinable.

The only thing that Persson and Ohta have in common is that they both talk about TDMA at some level. However, that is all. Persson and Ohta do not share a common problem to be solved.

Persson relates to performing measurements during unoccupied time slots and to setting a frequency synthesizer in transmission and reception paths (see Persson: column 1, line 65 to column 2, line 20).

Ohta, on the other hand, relates to a completely different technology, namely cable TV technology.

Therefore, Persson and Ohta do not have a common problem to be solved. Accordingly, we see no incentive for a skilled person to combine these two documents.

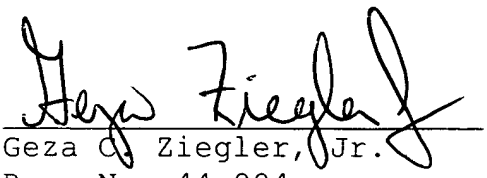
Thus, it is respectfully submitted that a *prima facie* case of obviousness cannot be established. There is no motivation to combine the references, and even when combined, the combination does not disclose or suggest each feature of Applicants' invention as claimed.

For all of the foregoing reasons, it is respectfully submitted that all of the claims now present in the application are clearly novel and patentable over the prior art of record, and are in proper form for allowance. Accordingly, favorable reconsideration and allowance is respectfully requested. Should

any unresolved issues remain, the Examiner is invited to call Applicants' attorney at the telephone number indicated below.

The Commissioner is hereby authorized to charge payment for any fees associated with this communication or credit any over payment to Deposit Account No. 16-1350.

Respectfully submitted,



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